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Federal Communications Commission  
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Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of

Amendment of Section 73.622(b)  
DTV Table of Television Allotments  
(Norwich, Connecticut)

Docket No. \_\_\_\_\_

To: Chief, Video Division, Media Bureau

PETITION FOR RULEMAKING

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Connecticut Public Broadcasting, Inc. ("CPBI"), licensee of noncommercial educational Station WEDN(TV), NTSC Channel \*53/ DTV Channel \*45, Norwich, Connecticut, through its attorneys, hereby petitions, pursuant to Section 73.622(a) of the Commission's rules, for amendment of Section 73.622(b) of the DTV Table of Television Allotments, to substitute DTV Channel \*8 for existing DTV Channel \*45 at Norwich for use as the station's DTV channel. In support thereof, the following is respectfully shown:

1. CPBI is a non-profit 501(c)(3) organization that has been serving the state of Connecticut with public broadcasting services since 1962. CPBI is the licensee of four television stations, four radio stations and one low power television station, including public television Station WEDN(TV) on NTSC Channel \*53/DTV Channel \*45 at Norwich, Connecticut. CPBI initiated digital television service on Channel \*45 at Norwich pursuant to STA in 2000, and commenced program tests at regular power on March 25, 2003. The application for license FCC File no. 2003-257 AL is pending.

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2. Attached hereto is a Technical Exhibit prepared by CPBI's consulting engineers. As shown in that Technical Exhibit, Channel \*9 can be allotted for service at Norwich at the same reference location as Channel \*45. CPBI asks that Channel \*9 be allotted with a nominal non-directional ERP of 6.0 kW and antenna HAAT of 192 m. The Technical Exhibit shows that the proposed Channel \*9 allotment meets the requirements for all existing U.S. NTSC facilities and U.S. DTV allotments and assignments, and does not affect any Class A TV stations. The proposal is within the Canadian border area and a technical showing is made that the proposal would not lead to interference to any Canadian station, as directed by the U.S.-Canada Letter of Understanding.

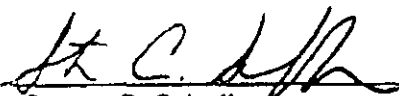
3. As explained in the Technical Exhibit, the allotment of Channel \*9 would provide service to an estimated population of 2,019,000, representing an increase in service population of 1,239,000 with respect to the WEDN-DT Channel \*45 allotment facility; and 651,000 with respect to the WEDN-DT Channel 45 licensed facility.

4. The proposed substitution of DTV Channel \*9 for DTV Channel \*45 fully complies with the applicable rules and will permit CPBI to file a "checklist" application for modification of construction permit. Grant of the requested substitution of channels will permit improved, interference-free DTV service in the public interest. Moreover, operation on Channel \*9 will be more cost-efficient in the long run over operation on Channel \*45.

Accordingly, we urge the Commission to issue a Notice of Proposed Rulemaking to substitute DTV Channel \*9 for DTV Channel \*45 at Norwich, Connecticut.<sup>1</sup>

Respectfully submitted,

CONNECTICUT PUBLIC BROADCASTING,  
INC.

  
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Its Attorneys

January 9, 2003<sup>1</sup>

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<sup>1</sup>CPBI notes that it has pending applications to exchange DTV Channel \*45 at Norwich for the digital channel assigned to CPBI's Hartford station, in applications submitted pursuant to Sections 73.622(c) and 73.623(g) of the Commission's rules (FCC File Nos. BNPEDT-20031008AAT and BNPEDT 19990113KG, as amended on October 8, 2003). Those applications were submitted to initiate digital television service in Hartford on DTV Channel \*45, and continuation of service (albeit at lower power) on DTV Channel \*32 at Norwich. CPBI would implement those facilities as proposed, but submits that the instant proposal for Channel \*9 at Norwich is superior to either DTV Channel \*45, the present allotment, or DTV Channel \*32, the allotment which would be substituted at Norwich in the event that the channel "swap" applications are approved and implemented. If required following implementation of the channel "swap" proposed in those applications, CPBI would supplement the instant petition with the comparisons of \*9 to \*32 as appropriate.

*du Treil, Lundin & Rackley, Inc.*

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Consulting Engineers

TECHNICAL EXHIBIT  
IN SUPPORT OF PETITION FOR RULE MAKING  
TELEVISION STATION WEDN-DT  
NORWICH CONNECTICUT

December 9, 2003

TECHNICAL EXHIBIT  
IN SUPPORT OF PETITION FOR RULE MAKING  
TELEVISION STATION WEDN-DT  
NORWALK, CONNECTICUT

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TECHNICAL EXHIBIT  
IN SUPPORT OF PETITION FOR RULE MAKING  
TELEVISION STATION WEDN-DT  
NORWICH, CONNECTICUT

Technical Statement

This Technical Statement was prepared on behalf of television broadcast station WEDN(TV), Norwich, Connecticut (Channel 53), in support of a Petition for Rule Making to amend Section 73.622(f) of the FCC Rules to change the WEDN-DT transitional digital television channel.

WEDN-DT was allotted DTV Channel 45 with a maximum effective radiated power (ERP) of 50 kW using a directional antenna and an antenna height above average terrain (HAAT) of 207 m.<sup>\*</sup> WEDN-DT is licensed for operation on Channel 45 with a nominal non-directional ERP of 6.0 kW and antenna HAAT of 192 m.<sup>†</sup> The instant petition proposes Channel 9 in lieu of Channel 45 for WEDN-DT's DTV transitional channel using the same alignment/license reference location. The petitioner proposes that Channel 9 be allotted with a nominal non-directional ERP of 6.0 kW and antenna HAAT of 192 m. As demonstrated herein, the proposed facility is in compliance with the U.S.-Canada Letter of Understanding (LOU) concerning digital television.<sup>‡</sup> The technical specifications for the proposed allotment are included herein at Figure 1.

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<sup>\*</sup> See Appendix B of *Second Memorandum Opinion and Order on Reconsideration of the Fifth and Sixth Report and Orders*, FCC-98-315, Released December 18, 1998.

<sup>†</sup> See FCC File No. BLEDT-20030425AAL.

<sup>‡</sup> See *Letter Of Understanding Between The Federal Communications Commission Of The United States Of America And Industry Canada Related To The Use Of The 54-72 MHz, 76-88 MHz, 174-216 MHz And 470-806 MHz Bands For The Digital Television Broadcasting Service Along The Common Border*, September 22, 2000.

The proposed transmitting antenna will be located with a center of radiation at an elevation of 284 m above mean sea level and 192 m HAAT. Given a maximum ERP of 6.0 kW, the proposed facility complies with Section 73.622(f)(7) concerning the maximum permissible ERP for Channel 7-13 DTV stations located in Zone I.

As indicated in Figure 2, the proposed WEDN-DT allotment on Channel 9 will provide 43 dBu f(50%) contour coverage over the entire community of Norwich, Connecticut in compliance with Section 73.625 of the FCC Rules.

The proposed Channel 9 facility meets the requirements of Section 73.623 of the FCC Rules concerning predicted interference to other existing U.S. NTSC facilities and U.S. DTV allotments and assignments. Longley-Rice interference analyses were conducted pursuant to the requirements of the FCC Rules, FCC OET Bulletin No. 69 ("OET-69")<sup>§</sup>, and published FCC guidelines for preparation of such interference analyses. The Longley-Rice interference analyses were conducted using the OET-69 software maintained by du Treil, Lundin & Rackley, Inc. based on the FCC published software routines.<sup>\*\*</sup> Stations selected for analysis were determined pursuant to the distance requirements outlined in the DTV Processing Guidelines Public Notice. Accordingly, co-channel DTV and NTSC stations within 429 km and 420 km, respectively, were examined for potential interference, and first-adjacent DTV and NTSC stations within 229 km and 220 km, respectively, were examined for potential interference. The results of the interference analyses for the proposed facility are summarized herein at Figure 3. As indicated therein, the proposed facility will meet the

<sup>§</sup> See *Longley-Rice Methodology for Evaluation of Coverage and Interference*, OET Bulletin 69, Federal Communications Commission (July 2, 1997).

<sup>\*\*</sup> The du Treil, Lundin & Rackley, Inc. DTV interference analysis program is a precise implementation of the procedures outlined by the FCC in the *Service Coordination and Order*, subsequent Memorandum Opinion and Order, and FCC OET Bulletin No. 69. A two-dimensional grid size resolution of 2 km was employed.

2%/10% criterion outlined in the FCC Rules and published guidelines with respect to all considered stations.

With respect to Class A station protection, the proposal has been evaluated according to the requirements of Section 73.623(c)(5) of the FCC Rules. The analysis reveals no potentially affected Class A TV stations.

The proposed reference site is located 389 km from the closest point on the border with Canada and is located within the Canadian border area governed by the U.S.-Canada LOU. According to the LOU, the proposed WEDN-DT facility would be classified as a "Class VU" allotment for study purposes. An allocation study was conducted in accordance with the practices of the LOU for the WEDN-DT facility. A spacing analysis was conducted according to the spacing requirements of Appendix 2 of the LOU with WEDN-DT assumed to be Class VU. The following table summarizes the spacing analysis for the pertinent Canadian allotment identified.

Channel	Type	Location	Class	Required Spacing (km)	Actual Spacing (km)	Result
9	TV	Sherbrooke	VU	276.0	421.3	145.3 km clear

Based on the foregoing we find that the WEDN-DT proposed Channel 9 allotment meets the requirements outlined in Section 6 of the LOU for new DTV allotment proposals meeting the spacing requirements of Appendix 2 of the LOU.

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[[ Interference analysis results reflect the net change in interference to a given station considering the interference predicted to occur from all other stations (i.e. "masking").



A summary of the revised service area and population numbers as they would appear in the Appendix B of the FCC's *Sixth Report and Order* and subsequent *Second Memorandum Opinion and Order* are summarized below:

State and City	NTSC Channel	DTV Channel	DTV Power (kW)	Antenna Height (m)	DTV Service During Transition	
					Area (sq. km)	People (Thous)
CT NORWICH	53	39	6.0	192.0	16407	2079

As indicated above, the proposed Channel 39 DTV allotment for WEDN-DT would provide service to an estimated population of 2,079,000. This represents an increase in service population of 1,239,000 with respect to the WEDN-DT Channel 45 allotment facility, 651,000 with respect to the WEDN-DT Channel 45 licensed facility;<sup>††</sup> and 1,311,000 with respect to the present WEDN Channel 53 analog facility.<sup>§§</sup> It is evident from the above that the proposed Channel 39 allotment proposal would result in a preferential arrangement of FCC allotments.

Robert du Treil, Jr.

du Treil, Lundin & Rackley, Inc.  
20 Fletcher Ave.  
Madison, WI 53703

October 9, 2003

<sup>††</sup> Based on OET-69 calculations, the WEDN Channel 45 licensed facility serves an estimated net population of 1,428,000 within its predicted 41 dBu (50.90) contour, considering Longley-Rice predicted losses due to terrain and interference. Consistent with the OET-69 procedures, all population figures herein are based on the 1990 census. The WEDN-TV (DT) service population figures are based on OET-69 calculations taking into consideration predicted losses due to terrain attenuation and interference. The WEDN-TV (DT) Channel 45 allotment facility service population is estimated to be 840,000. The WEDN-TV (DT) Channel 53 analog facility service population is estimated to be 768,000.

<sup>§§</sup> The WEDN-TV (DT) Channel 45 licensed facility serves an estimated net population of 1,428,000 within its predicted 41 dBu (50.90) contour, considering Longley-Rice predicted losses due to terrain and interference. Consistent with the OET-69 procedures, all population figures herein are based on the 1990 census. The WEDN-TV (DT) Channel 45 allotment facility service population is estimated to be 840,000. The WEDN-TV (DT) Channel 53 analog facility service population is estimated to be 768,000.

Figure 1

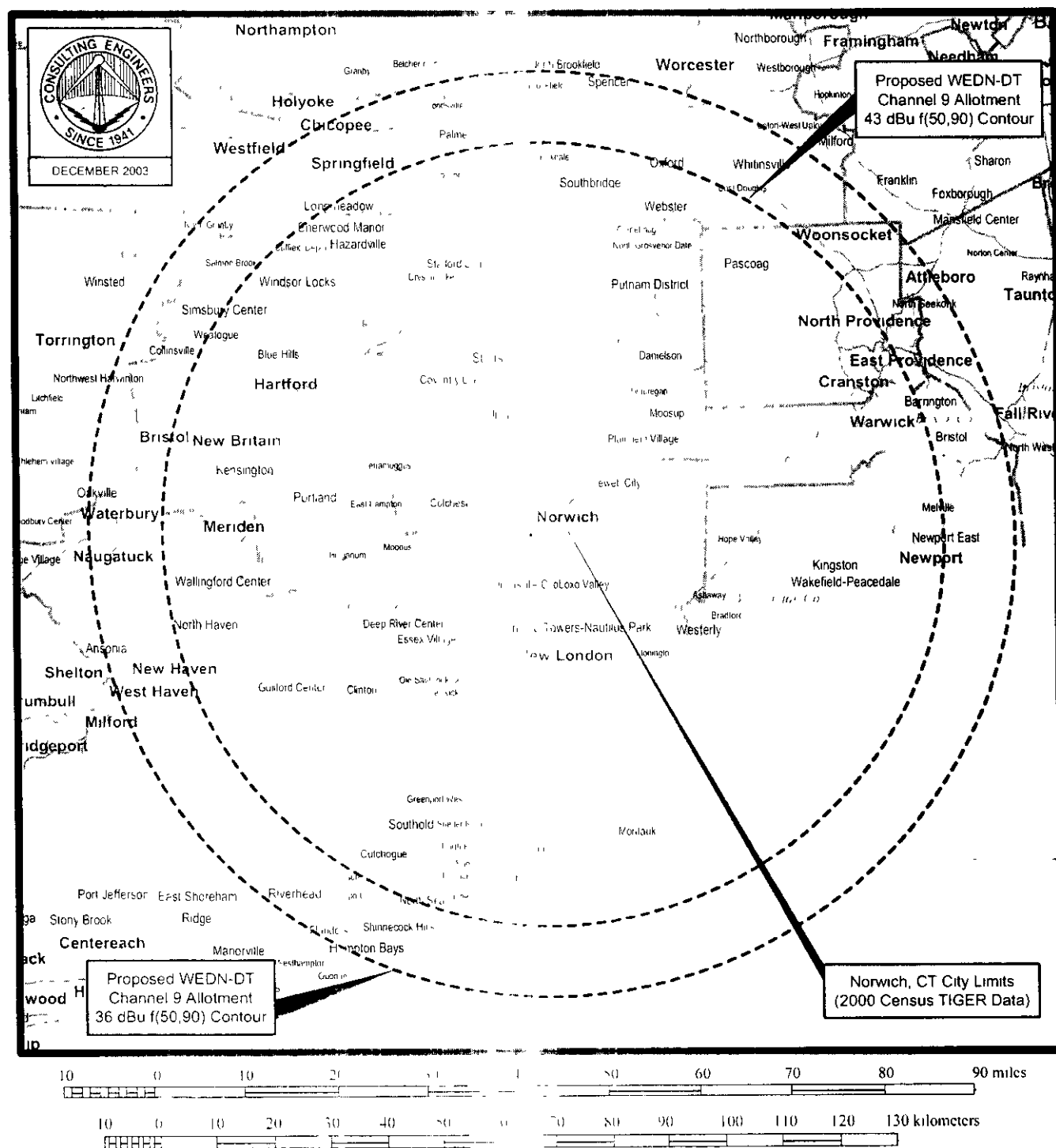
TECHNICAL EXHIBIT  
IN SUPPORT OF PETITION FOR RULE MAKING  
TELEVISION STATION WEDN-DT  
NORWICH, CONNECTICUT

Technical Specifications

Channel / Frequency Band	9 / 186-192 MHz
Zone	I
Reference Coordinates (NAD 27)	
Latitude	41°31'14" North
Longitude	72°10'03" West
Height of Radiation Center Above Mean Sea Level	284 m
Height of Radiation Center Above Ground Level	129 m
Height of Radiation Center Above Nearest Obstruction	192 m
Effective Radiated Power	6 kW

Directional Antenna Relative Field Values					
Degrees	Value	Degrees	Value	Degrees	Value
None directional antenna					

Figure 2



## PREDICTED COVERAGE CONTOURS

TELEVISION STATION WEDN-DT  
NORWICH, CONNECTICUT

du Tremblay & Associates, Inc. Sarasota, Florida

TECHNICAL EXHIBIT  
IN SUPPORT OF PETITION FOR RULE MAKING  
TELEVISION STATION WEDN-DT  
NORWICH, CONNECTICUT

Summary of Domestic Allocation Analysis

Stations Potentially Affected by Proposed Station							
Facility Number	Channel	Call	City/State	Distance (km)	Status	Application Prefix	Application Reference Number
3	8	WMBC-DT	NEWTON NJ	210.5	PLN	DTVPLN	DTVP0043
4	9	WMUR-TV	MANCHESTER NH	169.4	LIC	BMLCT	218
5	9	WWOR-TV	SECAUCUS NJ	178.8	LIC	BLCT	19810514KF
6	9	WIXT-TV	SYRACUSE NY	354.7	LIC	BLCT	19860717KF
7	9	WBPH-TV	BETHLEHEM PA	294.2	APP	BMPCDT	20030522ADF
8	9	WBPH-DT	BETHLEHEM PA	294.2	LIC	BPRM	20011130AHC
9	9	WWLF-DT	HAZLETON PA	331.6	PLN	DTVPLN	DTVP0058
10	9	WVER-TV	RUTLAND VT	249.8	APP	BPRM	20000803AAC
11	10	WTNH	NEW HAVEN CT	66.2	CP MOD	BMPCDT	19990422KE
12	10	WTNH-DT	NEW HAVEN CT	66.2	PLN	DTVPLN	DTVP0068
13	10	WTEN	ALBANY NY	195.5	LIC	BLCT	1285
14	10	WJAR	PROVIDENCE RI	82.5	LIC	BLCT	2395

Summary of Interference Analysis for Worst-Case Scenarios							
Facility Number	Interference Population Before Analysis	Interference Population After Analysis	Baseline Population	Net Change in Interference	Percent of Baseline	Permissible Percent of Baseline	Result
1	1559632	1606083	6106795	46451	0.693	2.0	pass
2	--	--	--	--	0.000	--	pass
3	--	--	--	--	0.000	--	pass
4	400065	492014	4956255	91949	1.855	2.0	pass
5	1112710	1136981	5363748	24271	0.453	2.0	pass
6	--	--	--	--	0.000	--	pass
7	--	--	--	--	0.000	--	pass
8	2117897	2117897	6074845	0	0.000	2.0	pass
9	123645	123645	1013915	0	0.000	2.0	pass
10	40490	40643	867902	153	0.018	2.0	pass
11	1112710	1136981	5363748	24271	0.453	2.0	pass
12	899798	916324	5363748	16526	0.308	2.0	pass
13	--	--	--	--	0.000	--	pass
14	941605	950421	6350135	8816	0.139	2.0	pass